

SARSIELLA PSEUDOSPINOSA, A NEW MARINE OSTRACOD
(MYODOCOPINA; SARSIELLIDAE)
FROM SOUTHERN CALIFORNIA

James H. Baker

From 1956 to 1960, the Allan Hancock Foundation of the University of Southern California undertook an oceanographic survey of the area from Point Conception to the Mexican border and extending seaward to the 100-m contour. This area is known as the mainland shelf portion of the continental shelf off southern California. Of 1,498 stations occupied, 455 contained a total of 22 cypridinacean species (Baker, Ph.D. dissertation, 1975), including the following 3 species of *Sarsiella*:

Sarsiella zostericola Cushman, 1906, known from the Atlantic and Pacific coasts of the United States, the Gulf of Mexico, and recently, England (Kornicker, 1975), was found in this study off Dana Pt., Newport Beach, Pt. Fermin, and Santa Monica. *Sarsiella tubipora* Darby, 1965, known from off the coast of Georgia, was found in southern California off San Diego, Oceanside, San Mateo Pt., Huntington Beach, Seal Beach, Manhattan Beach, Venice, Santa Monica, Pt. Mugu, Pt. Las Pitas, Sand Pt., Loon Pt., Goleta Pt., Coal Oil Pt., Lento, and Pt. Conception. *Sarsiella pseudospinosa*, the new species, is described below.

Order MYODOCOPIDA Sars, 1866

Suborder MYODOCOPINA Sars, 1866

Family SARSIELLIDAE Brady and Norman, 1896

Sarsiella pseudospinosa, new species

Figs. 1-2

Holotype.—AHF 5816, adult female from Station 5562, length 1.38 mm, height 1.15 mm. Valves in alcohol, appendages on slide.

Type-locality.—Station 5562, off Pt. Conception, California, 34°26'47"N, 120°21'35"W, bottom depth 19.2 m, water temperature 15.5°C, salinity 33.6‰, Secchi disc reading 9.1 m.

Material.—The holotype and a second female from Station 5631, off San Mateo Pt., 33°22'50"N, 117°34'55"W, bottom depth 17.1 m, salinity 33.6‰, Secchi disc reading 3.0 m, sediment calcium carbonate 21.9%, sediment nitrogen 0.069%, in silty-sand. The second individual is in poor condition and, therefore, is not designated as a paratype.

Etymology.—Named for the spinose appearance of tube-pores covering the surface of the carapace.

Remarks.—The holotype had a Foraminifera of the family Lituolidae attached to the carapace.

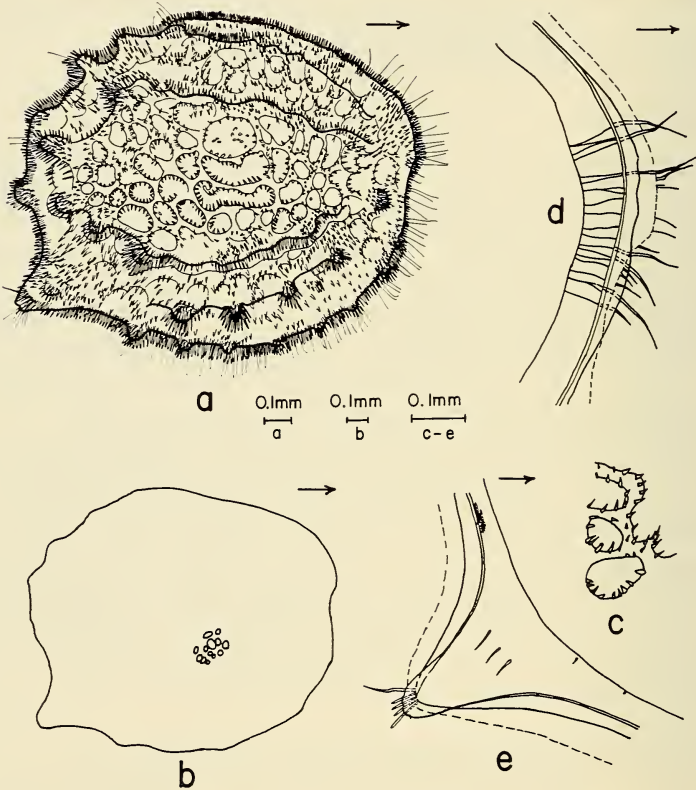


Fig. 1. *Sarsiella pseudospinosa*, holotype, adult female: a, Entire view, lateral surface of right valve; b, Muscle scar pattern, medial view of left valve; c, Part of reticulated pattern, medial view of left valve; d, Infold area of rostrum; e, Infold area of caudal process.

Description of Female.—Shell (Fig. 1a): Oval, greatest height anterior to middle; anterior produced in area of rostrum, incisur shallow but distinct, ventroposterior acuminate to form caudal process.

Ornamentation (Fig. 1c): Dorsal and ventral ridges, just within margin, bearing 4 or 5 nodes; central nodose ridge, open anteriorly; surface with shallow reticulations; edge of reticulations, inter-reticulated area, margin, and ridges with hollow tube-pores, appearing to be spines.

Infold (Fig. 1d, c): Four short bare bristles, in a row, perpendicular to long axis of caudal process in right valve, only 3 in left valve; 2 hirsute bristles dorsal to caudal process; 2 very short bristles along inner margin of infold in front of caudal process.

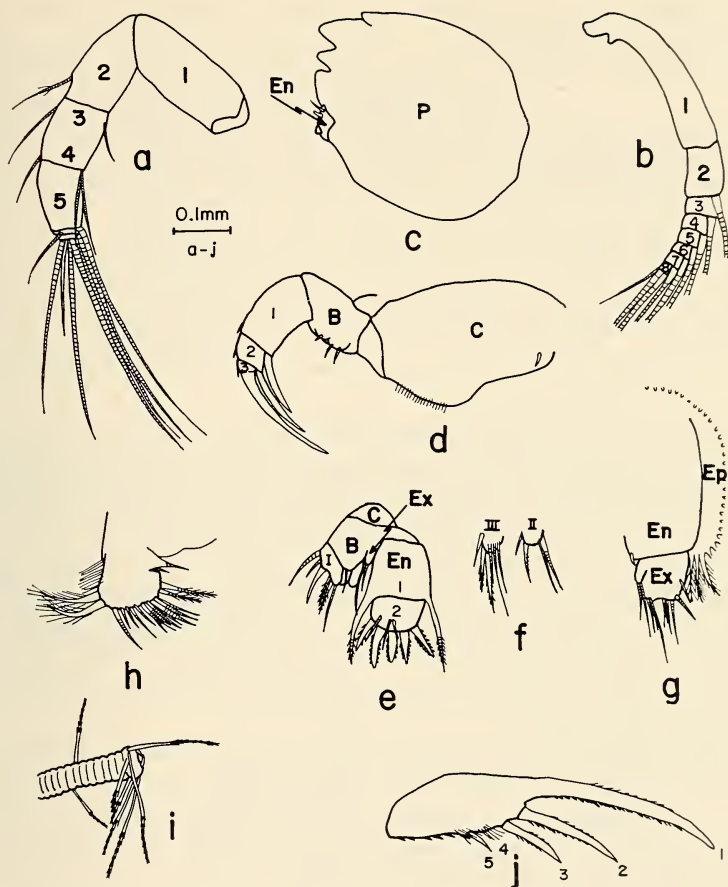


Fig. 2. *Sarsiella pseudospinosa*, holotype, adult female: a, 1st antenna; b, 2nd antenna, exopodite; c, 2nd antenna, protopodite and endopodite; d, Mandible; e, Maxilla; f, Maxilla, endites II and III enlarged; g, 5th limb; h, 6th limb; i, 7th limb; j, Furca. (B-basale, C-coxale, En-endopodite, Ep-epipodite, Ex-exopodite, P-protopodite).

Selvage: Narrow with wide lamellar prolongation with smooth outer margin.

Muscle scars (Fig. 1b): Circular pattern of 6, ovoid, some divided, ventroanterior to midpoint.

Pore canals: Normal pores, hollow, tubular spinose; radial pores with long setae; setae distributed from anterior ventrally to caudal process.

First antenna (Fig. 2a): 1st podomere bare; 2nd podomere with 1 spinose dorsal bristle; 3rd podomere with 1 ventral and 1 dorsal bristle;

Table 1. Comparison of females of North American species of the *Sarsiella carinata* group (Kornicker and Wise, 1962).

Species	Carapace length (mm)	No. bristles 7th limb	No. claws furca
<i>Sarsiella pseudospinosa</i> Baker	1.38	6 terminal 2 lateral	5
<i>Sarsiella tubipora</i> Darby	1.55	6 terminal 2 lateral	5
<i>Sarsiella spinosa</i> Kornicker and Wise	1.43	4 terminal 3 lateral	5

4th podomere not separated from 3rd, 1 dorsal bristle, 2 long ventral bristles; 5th podomere with 1 stout ventral sensory bristle; 6th podomere with 1 medial bristle; 7th podomere with a-, b-, and c-bristles; 8th podomere with d-, e-, f-, and g-bristles, bare, about same length as sensory bristle of 5th podomere.

Second antenna (Fig. 2b, c): Exopodite of 9 podomeres; 2nd-8th with 1 stout bristle with hairs along both margins and minute spines along ventral margin; 9th podomere with similar bristle plus 1 short bare bristle. Endopodite of 1 segment, bulbous, with 1 short distal chitinous protuberance, 2 short stout dorsal bristles.

Mandible (Fig. 2d): Coxale short spine proximally and hairs along distal part of ventral margin; basale with 3 short stout ventral bristles. Endopodite, 1st podomere with minute dorsal terminal spine and long stout terminal ventral claw; 2nd podomere same as 1st; 3rd podomere with 1 minute dorsal spine and long stout terminal claw.

Maxilla (Fig. 2e, f): Exopodite with 1 long and 1 short bristle; basale with 1 short ventral bristle; 1st to 3rd endites with 4 to 6 bristles. Endopodite, 1st podomere with terminal spinous alpha and beta bristles; 2nd podomere with 2 a-bristles, 1 short c-bristle; 5 terminal stout b- and d-bristles with marginal denticles.

Fifth limb (Fig. 2g): One endite with 1 short bristle. Exopodite, 1st podomere with 2 terminal bristles; 2nd-5th podomeres not separated, 2nd podomere with 3 bristles, 3rd-5th with 5 terminal bristles and 1 medial bristle; surface of 2nd-5th podomeres covered with fine hairs; epipodite with 20 hirsute bristles.

Sixth limb (Fig. 2h): One endite with 2 spinose bristles; end podomere anteriorly with 2 rows of 13 bristles, 6 in one row and 7 in other, posteriorly with 2 long hirsute bristles, fine hairs along anterior and posterior margins.

Seventh limb (Fig. 2i): Terminal end with 6 bristles, 3 on each side; 2 proximal bristles, 1 on each side; all bristles with 4 to 7 bells.

Furca (Fig. 2j): Each lamella with 5 claws, claw 4 broken off: claw 1 continuous with lamella, remaining claws separated by suture; claws 1-3 with scattered teeth and short hairs along posterior margin; scattered minute spines along posterior margins of lamella.

Comparisons.—Long hollow tube pores resemble those of *Sarsiella tubipora*. However, in *S. pseudospinosa*, they differ by being about 2 to 3 times as long as in *S. tubipora* and closely resemble short spines. *Sarsiella pseudospinosa* also has the dorsal and ventral ridges in addition to the central nodose ring, which differentiates it from *S. tubipora* and *S. spinosa* Kornicker and Wise, 1962. It is a member of the *S. carinata* group of Kornicker and Wise (1962) and is compared to the North American members of the group in Table 1.

Acknowledgments

The samples containing the Ostracoda were kindly loaned to the author by Dr. John S. Grath, Allan Hancock Foundation. This research was supported in part by a Grant-in-Aid of Research from the Society of The Sigma Xi and The University of Houston Coastal Research Center. Dr. Louis S. Kornicker critically reviewed the manuscript. The manuscript was typed by Mrs. Jeanne N. Rossman.

Literature Cited

- Allan Hancock Foundation. 1965. An oceanographic and biological survey of the southern California mainland shelf. Appendix—Data. California State Water Quality Control Bd. 27 (Appendix):1-445.
- Baker, J. H. 1975. Distributions, ecology, and life histories of selected Cypridinacea (Myodocopida, Ostracoda) from the southern California mainland shelf. Ph.D. Dissertation, University of Houston, Houston, Texas. xiv + 185 pp. 27 figs.
- Brady, G. S., and A. M. Norman. 1896. A monograph of the marine and fresh water Ostracoda of the North Atlantic and of north-western Europe. Part II. Sections II-IV: Myodocopa, Cladocopa, and Platycopa. Sci. Trans. Roy. Dublin Soc. Ser. 2, 5:621-772, 62 pls.
- Cushman, J. A. 1906. Marine Ostracoda of Vineyard Sound and adjacent waters. Proc. Boston Soc. Nat. Hist. 32:359-385.
- Darby, D. G. 1965. Ecology and taxonomy of Ostracoda in the vicinity of Sapelo Island, Georgia, pp. iii-vi, 1-76, text-figs. 1-89. Report No. 2 in: R. V. Kesling, D. G. Darby, R. N. Smith, and D. D. Hall, Four reports of ostracod investigations conducted under National Science Foundation Project GB-26. University of Michigan, Ann Arbor.
- Kornicker, L. S. 1965. Spread of ostracods to exotic environs on transplanted oysters, pp. 129-139. In F. M. Swain, L. S. Kornicker, and R. F. Lundin (eds.), Biology and Paleobiology of Ostracoda. Bull. Amer. Paleontol. 65(282):1-687. Paleontological Research Institution, Ithaca.
- , and C. D. Wise. 1962. *Sarsiella* (Ostracoda) in Texas bays and lagoons. Crustaceana 4(1):57-74.

Sars, G. O. 1866. Oversigt af Norges marine Ostracoder. Norske Forhandl. Vidensk.-Selsk. Cristiania (1865)8:1-131.

Department of Biology, University of Houston, Houston, Texas 77044.

Based on material submitted in partial fulfillment of the requirements for the Ph.D. degree.

Present address.—Southwest Research Institute, 3600 Yoakum Boulevard, Houston, Texas 77006, U.S.A.